# NOTES ON SOME PROPOSED RARE AND ENDANGERED VASCULAR PLANT SPECIES IN MARYLAND

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Since the enactment of the Endangered Species Act of 1973 numerous studies have been initiated to effect the preservation and understanding of rare plants. Data collection from herbaria, botanical literature, and local authorities is often the initial task undertaken to evaluate the status of rare and endangered species for conservation programs. Broome et al. (1979) prepared an annotated list of vascular plants, based primarily upon herbarium and literature records, which they considered rare or of special concern within the State of Maryland. As a result of recent field studies I have compiled additional information for twelve of the species listed by Broome et al. (1979).

The taxa are presented alphabetically and include a statement of significance (acronyms adopted from Broome et al. (1979) are: FEW - "Few", three or less vouchered occurrences; DISJ - "Disjunct", a significant disjunction in range; LOCAL - "Local", restricted to specialized habitats; NELR, SELR, SLR - "Northeastern, Southeastern and Southern limit of range"; SMS - "Single Maryland Station"; UNDT - "Undetermined", reported sites not vouchered or material not seen) and county distribution with date of last vouchered collection. Voucher speci-

mens have been deposited in the Towson State University Herbarium (BALT) and the Herbarium of the University of Maryland at College Park (MARY).

Ammania teres Raf. (Lythraceae). Significance FEW; Dorchester 1976, and Worcester 1906, Cos. Additional, contiguous localities have been discovered in Kent Co.; common in marshes at Overton and in Eastern Neck Wildlife Refuge, 10-1-80, Riefner 80448 & 80455.

Asplenium cryptolepis Fern. (Polypodiaceae). Significance UNDT; reportedly from the Hagerstown Valley, Frederick and Washington Cos. by Reed (1953), no specimens seen. A locality discovered in Washington Co.; common in crevices of Conococheague limestone outcrops along the C&O Canal and the Potomac River near Dam No. 5, 10-12-80, Riefner 80526.

Asplenium montanum Willd. (Polypodiaceae). Significance FEW; Allegany 1964, Baltimore 1972, Garrett 1973, and Montgomery 1940, Cos. An additional locality discovered in Allegany Co.; common in sandstone crevices near the lake spillway of Rocky Gap State Park and Polish Mountain Wildlife Management Area, 7-26-80, Riefner 80272.

Asplenium pinnatifidum Nutt. (Polypodiaceae). Significance UNDT; Cecil Co. 1941, reported also in Baltimore, Frederick, Harford and Washington Cos. by Reed (1953), no specimens seen. A locality discovered in Washington Co.; infrequent in crevices of Martinsburg shale outcrops, upper elevations of the highest bluffs along Sandy Hook Rd., W. 1 mi. from Rt. 340, 9-20-80, Riefner 80396.

Carex trichocarpa Muhl. (Cyperaceae). Significance SMS, SELR; Howard Co. 1938. A second report and a new county record for the State; dense swales and bottomlands, discovered along the Big Gunpowder

Falls, Gunpowder Falls State Park, Baltimore Co., ½ mi. upriver from Masemore Rd. crossing, 5-31-80, Riefner 8083.

Dicentra eximia (Ker.-Gawl.) Torr. (Fumariaceae). Significance FEW; Allegany 1971, and Montgomery 1976, Cos. New localities found in Allegany Co.; sandstone ledges near the lake spillway at Rocky Gap State Park, 7-26-80, Riefner 80268; sandstone ledges and rocky woods on mountainsides 2 mi. N. on Rt. 36 from Rt. 40 junction, E. side of Wills Creek, 9-13-80, Riefner 80375.

Gymnopogon brevifolius Trin. (Poaceae). Significance FEW; Wicomico 1878 and Worcester 1932, Cos. Infrequent populations are extant in Ocean City, Worcester Co. in the vicinity of 100 St. and Coastal Hwy., 9-20-80, Riefner 80384. Increasing pressure for land development in this resort community will probably extripate the species in the near future at this locality.

Houstonia pusilla Schoepf (Rubiaceae). Significance DISJ, NELR; Anne Arundel 1951 and Harford 1978, Cos. An additional locality has been discovered in Harford Co. 3/4 mi. downstream along Deer Creek from the Telegraph Rd. crossing, streamside schist outcrops, 4-16-80, Riefner 8029. Rare and not well established in crevices of floodplain rocks only. This species was not found by the author in previous years during extensive collecting of the area for plant-animal interaction studies. H. pusilla is considered by Reed (1980) to be introduced into the State along with grass seed. The recent development of residential communities on agricultural lands in the Deer Creek drainage may have led to the introduction of the species along with grass seed for lawns and roadbanks. There appears to be reasonable doubt that the species is indigenous to Maryland and its occurrence in the State probably represents

an accidental introduction.

Matteuccia struthiopteris (L.) Todaro (Polypodiaceae). Significance UNDT; reportedly from Baltimore and Harford Cos. by Reed (1953), no specimens seen. A large population has been discovered in Baltimore Co. in alluvial woods along the Patapsco River, Patapsco River Valley State Park near the Rt. 70 bridge, 5-2-80, Riefner 8032.

Paronychia fastigiata (Raf.) Fern. var. pumila (Wood) Fern. (Caryophyllaceae). Significance FEW, LOCAL; three localities Allegany 1977 and Washington 1906, Cos. This species is more abundant in Allegany and Washington Cos. than previous data has indicated Core (1941), and is here reported for the first time from Frederick Co. The Virginia whitlow-wort is not restricted to shale barrens and may be found growing in shale outcrop sections in open woods, and barren road banks simulating shale barrens, which are associated with subsurface shale beds. Collection data - Allegany Co.: shale barrens in Green Ridge State Forest, 9-21-80, Riefner et al. 80408; shale barrens near Old Town, 9-21-80, Riefner et al. 80413; dry woods and stony road banks along Wilson Rd. E. from Rt. 51, 10-4-80, Riefner 80491; roadcut exposures of Romney shale, on road banks and wooded slopes, along Rt. 40 E. of Black Valley Rd., 10-13-80, Riefner 80540; Red Hill, shale woods and exposed shaly banks behind LaVale Plaza on Rt. 40 near Rt. 53 junction, 10-13-80, Riefner 80545; shale barrens, Wills Creek shale along Rt. 220 near southern limits of Cumberland City, 10-13-80, Riefner 80549. Frederick Co.: Blue Ridge Mountains, Elk Ridge, brown shale ledges and eroded argillaceous road banks along Rt. 340 between Rt. 180 & Rt. 464, 10-13-80, Riefner 80580. Washington Co.: open woods in red shale outcrop section in Sideling Hill Wildlife Management

Area ca. 2 mi. S. from Rt. 40 along Sideling Hill Creek, 8-9-80, Riefner 80329; Elk Ridge, Martinsburg shale outcrops and high wooded shale slopes along Sandy Hook Rd. 1 mi. W. from Rt. 340, 9-20-80, Riefner 80397; open woods and barren road banks in red shale outcrop section along Catholic Church Rd. 1 mi. E. of Forsythe, 9-21-80, Riefner et al. 80406; shale barrens along High Germany Rd., 9-21-80, Riefner et al. 80407. This species is rather abundant in shale barrens, simulated shale barrens created by the agency of man along road cuts, and shale outcrop sections of Allegany and Washington Cos. in the Valley and Ridge district. Preliminary field reconnaissance of shale formations in Carroll, Garrett and Montgomery Cos. cited by Vokes and Edwards (1974) did not reveal additional populations. In light of the additional habitat data presented herein, P. fastigiata var. pumila may be expected to occur in Garrett Co., although rarely so, as in Frederick Co. This species is in need of further review 1) to verify its association with distinct topographic features, especially in peripherial areas of the Ridge and Valley district as the Blue Ridge Mountains and the Allegheny plateau, and 2) to ascertain the apparent and recent spread of the species into man-made habitats with regard to affording such a species rare status. However, the Virginia whitlow-wort is not of rare occurrence and in addition, the lack of extensive residential and commercial development in two relatively large counties, the species is not in danger of extripation at this time and perhaps should be considered for deletion from the list.

Prunus maritima Marsh. (Rosaceae). Significance SLR, FEW; Assateague Island, Worcester Co., 1967. Extant in the vicinity of 100 St. and Coastal Hwy., Ocean City, Worcester Co. where previously thought to be extripated, 9-19-80, Riefner 80384. Increasing pressure for land devel-

opment in this resort community will probably extripate the species in the near future at this locality.

Woodsia ilvensis (L.) R.Br. (Polypodiaceae). Significance UNDT; reportedly from Allegany Co. by Reed (1953), no specimens seen. Extant in Allegany Co. along Town Creek near Rt. 40 in crevices of exposed Jennings shale, 9-21-80, Riefner et al. 80402.

In review of the significance of these records, collections of special interest are: Carex trichocarpa Muhl., which represents a second report for the State; and Paronychia fastigiata (Raf.) Fern. var. pumila (Wood) Fern. and Houstonia pusilla Schoepf, which are questionable candidates for rare status in the State, are here recommended for deletion from the list. As noted by Broome et al. (1979) extensive field work was not within the scope of their report and it is evident that much additional field study is necessary before their list can be considered definative.

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